

Mr. Chairman and members of the committee, the Air Force has an unlimited horizon for air and space capabilities. Our service was borne of innovation, and we remain focused on identifying and developing the concepts of operation, advanced technologies, and integrated operations required to provide the joint force with unprecedented capabilities and to remain the world's dominant air and space force.

The Wright brothers' historic flight in 1903 ushered in the dawn of a dramatic era of scientific, cultural, and technological advances. As the Air Force celebrates this centennial of powered flight, we do so with the recognition that, despite the daunting challenges of a more dynamic security environment, the next hundred years will witness equally fantastic achievements. The 2003 Air Force Posture Statement reflects this optimism. In this report, we relate some of our accomplishments of 2002 as well as our vision of an innovative and adaptive force capable of guaranteeing American air and space dominance for the decades to come. Our successes are America's successes; they are the direct result of the selfless and unconditional service by men and women of the Total Air Force and their families.

During the past year, and in the midst of combat and a variety of contingency operations, we evaluated, implemented, and validated a host of technological advances, organizational changes, and concepts of operation. These enabled us to deliver desired effects faster and with greater precision than at any time in the history of warfare. Such adaptation is characteristic of our service, as airmen continually strive to push innovation ever forward en route to unprecedented air and space capabilities for combatant commanders, the joint force, and our nation. In the year ahead, we will move our expeditionary Air Force closer to realizing the transformational imperatives of this new era, machine-to-machine digital integration of manned, unmanned and space assets, and joint command and control. Our concepts of operation leverage

this integration, and expand our asymmetric advantages in air and space -- advantages that are fundamental to defending America's interests, assuring our allies and coalition partners, and winning the nation's wars.

We recognize the responsibility for America's security is not one we shoulder alone. We work tirelessly toward developing and training professional airmen, transitioning new technologies into warfighting, and integrating the capabilities of our sister services, other government agencies, and those of our friends abroad to act in the most efficient and effective manner across all operations--from humanitarian to combat missions. At the same time, we pay special attention to the consolidating aerospace industry, our acquisition processes, and our critical modernization challenges, to ensure we will be able to draw upon our core competencies for decades to come.

Blessed with full endorsement from the American people, the Congress, and the President, we will remain the world's dominant Air Force. We are honored to serve with America's airmen, and we sincerely appreciate the confidence in our commitment and capability to provide our great nation with superiority in air and space.

## **Introduction**

As America approaches the 100<sup>th</sup> anniversary of powered flight, the Air Force realizes that the nation is only in the adolescence of air and space capabilities. Yet we envision a future that will manifest dramatic advances in propulsion, operational employment, weapon systems, information technology, education, and training for our air and space forces. It is a future of unprecedented, seamless integration of air and space capabilities with joint command and control at the operational level of war, and machine-to-machine integration at the tactical level. We are

pursuing these changes—some elementary, others revolutionary—which will dramatically escalate the capabilities available to the joint forces of the United States; perpetuate American air and space dominance; and redefine the nature of warfare.

If there was any ambiguity about the nature of the security environment in this new century, the attacks of September 11, 2001 crystallized the setting. Just as the turmoil of the previous decade eluded prediction, the dynamic setting of the decades ahead poses even greater predictive challenges as centers of power and sources of conflict migrate from traditional origins. No longer will it suffice to prepare for real and perceived threats from nation-states. Instead, we must apply the sum of our operational experiences and experimentation to develop dynamic, flexible, and adaptable forces, capable of dissuading, deterring, and defeating a much wider range of potential adversaries, while still assuring her friends and allies.

This fluid setting underscores the need for doctrinal agility, and expeditious and responsive acquisition, planning, and execution across the spectrum of capabilities in support of homeland security -- from the most difficult anti-access scenario to humanitarian relief. As new generations of technology proliferate among potential adversaries, we also are reminded of the need to keep pushing technology forward. In less than one hundred years, we elevated from a Kitty Hawk bi-plane flying 100 feet on a 12-second flight, to a host of sophisticated, stealthy aerial vehicles capable of reaching any place in the world, and an array of satellites that circle the globe continuously. We do not rest on these achievements, but instead engage a new generation of innovation. Therefore, our mission is to make calculated research, development, and procurement decisions with the resolve to integrate all of our combat, information, and support systems into an enterprise architecture that contributes joint air and space capabilities to help win the nation's wars.

Meeting these requirements also warrants our continued transformation into an expeditionary force with the culture, composition, and capabilities to fulfill our evolving operational tasks. As the scope of global contingencies requiring American involvement has multiplied, we have witnessed the substantial value of agility, rapid response, and integration. Thus, we are becoming ever more responsive in time, technology, and training, and in the process, we are elevating Air Force contributions to joint capabilities, while developing our airmen as joint warfighters.

A year ago, Secretary Rumsfeld laid out a number of key priorities for the Department of Defense (DoD). All of these — from pursuing the global war on terrorism and strengthening joint warfighting capabilities, to streamlining the DoD processes and improving interagency integration — demand across-the-board changes in the way the Defense Department operates. The Air Force has taken advantage of this opportunity to evaluate and strengthen our capabilities, and to fundamentally drive our investment strategy.

As we contemplate more than a decade of unprecedented success using air and space power, we recognize that we never fight alone. The emerging interdependence of joint, coalition, and alliance partnerships throughout a decade of contingency warfare has been a profound lesson learned. Through cooperative planning, we will realize the full potential of our service — bringing to bear fully integrated air and space capabilities.

It is our imperative to approach this planning and integration with innovation and vision, fundamentally focused on capabilities. All of the armed forces are focusing on meeting the Quadrennial Defense Review's "1-4-2-1" force-shaping construct, by defining the fundamental capabilities required to meet the challenges of a changing world. These are: to defend the United States through Homeland Security; to deter aggression and coercion in the four critical regions of

Europe, Northeast Asia, Southwest Asia and the Asian littorals; to swiftly defeat aggression in overlapping major conflicts while being capable of decisive victory in one of those conflicts; and, to conduct a number of smaller scale contingencies. A revitalized, capabilities-focused approach to operational military requirements will allow us to meet these missions.

Our focus on capabilities for an uncertain future has inspired us to adapt anew the way we organize, train, and equip our forces. We have begun by developing Task Force Concepts of Operation (TF CONOPS), which will define how we will fight and integrate our air and space capabilities with joint, coalition, and alliance forces. The requirements that emerge from these operational concepts will guide a reformed acquisition process that will include more active, continuous partnerships among requirement, development, operational, test, and industry communities working side-by-side at the program level.

This process can only be successful with the help of a vibrant defense industry. Yet today the aerospace industry is consolidating to a point that threatens to diminish the advantages of competition. This, in turn, can lead to loss of innovation, diminished technical skill base, lower cost efficiencies, and other challenges. We must foster increased competition to ensure the long-term health of an industrial sector critical to our national security. While the Air Force will continue to advance the vision and associated capabilities for air and space, we also must challenge industry in order for it to stay on the cutting edge of technology and efficient management practices.

Finally, transforming our force will not be possible without a process to educate, train, and offer experience to the right mix of Active Duty, Air National Guard, Air Force Reserve and Civilian airmen who understand the nature of our changing security environment. To achieve this, we will evolve what we have traditionally called the “personnel” function in new ways so as

to blend Professional Military Education, advanced academic degrees, and assignment policies under the auspices of “Force Development.”

This is the United States Air Force in 2003—inherently innovative, tirelessly dedicated, and comprised of the very best airmen and capabilities in the world to ensure American security and defend her interests. This is what our nation expects, and we will continually meet that expectation.

## **WHAT WE DO**

The United States armed forces exist to fight and win our nation's wars, which no service can accomplish alone. The Air Force's pivotal role is to deliver fully capable and integrated air and space power to the Joint Force Commander (JFC). By dominating the media of elevation, the Air Force offers unique warfighting capabilities that leverage the strengths of surface forces and expand the range of potential effects.

Air and space are realms with unlimited horizons for discovery and development. While the Air Force has made tremendous strides in realizing the visions of early airmen and exploiting the operational potential in each medium, we know there is an array of capabilities as yet undiscovered. As the Air Force strives to realize these possibilities, we deliver a multitude of air and space achievements for joint warfighting.

Although relatively short, Air Force history reveals fundamental competencies that are core to developing and delivering air and space power – those unique institutional qualities that set the Air Force apart from the other Services and any other military force in the world. By identifying and keeping these competencies foremost in our vision, we are able to more effectively advance the unique capabilities, as well as the ultimate effects, the Air Force provides to the joint force and the Nation.

The Air Force continually develops areas of expertise that make us the preeminent air and space force in the world. Previously, we distilled these into six distinctive capabilities which we referred to as our “core competencies” – Air and Space Superiority, Global Attack, Rapid Global Mobility, Precision Engagement, Information Superiority, and Agile Combat Support. However, just as our concepts of operations and capabilities continuously evolve, so also does the way in

which we articulate Air Force competencies. With deeper refinement, we learned there are more fundamental elements to what we are as an Air Force and how we develop our capabilities for joint warfighting. These are our underlying institutional air and space core competencies – those that, in fact, make the six distinctive capabilities possible: Developing Airmen, Technology-to-Warfighting, and Integrating Operations. These three air and space core competencies form the basis through which we organize, train, and equip and from which we derive our strengths as a service:

**1) Developing Airmen:** *The heart of combat capability*

The ultimate source of air and space combat capability resides in the men and women of the Air Force. The value of technology, organization, and strategy are diminished without professional airmen to leverage their value. Our Total Force of Active, Guard, Reserve, and Civilian personnel are our largest investment and most critical asset. They are airmen: steeped in our expeditionary Service ethos. Therefore, from the moment they step into the Air Force through to their last day in service, we are dedicated to ensuring they receive the precise education, training, and professional development necessary to provide a quality edge second to none. The full spectrum capabilities of our Air Force stem from the collective abilities of our personnel; and the abilities of our people stem from career-long development of professional airmen.

**2) Technology-to-warfighting:** *The tools of combat capability*

The vision of airmen in employing air and space power fundamentally altered how we address conflict. As the leader in military application of air and space technology, the Air Force is committed to innovation and possesses a vision to guide research, development, and fielding

of unsurpassed capabilities. Just as the advent of aircraft revolutionized joint warfighting, recent advances in low observable technologies, space-based systems, manipulation of information, precision, and small, smart weapons offer no less dramatic advantages for combatant commanders. The Air Force nurtures and promotes its ability to translate vision into operational capability in order to produce desired effects. Our innovative operational concepts illuminate the capabilities we need, allowing us to develop unsurpassed capabilities to prevail in conflict and avert technological surprise.

The F/A-22 is demonstrative of this ability to adapt technology to warfighting capabilities. Originally envisioned as an air superiority fighter, it has been transformed into a multi-role system. The F/A-22 not only brings to bear warfighting capabilities without equal for decades to come, but also includes those we did not foresee at its inception. Collectively, the platform's supercruise, stealth, maneuverability, and novel avionics will deliver the ability to create crucial battlefield effects to the hands of the warfighter, and allow access to revolutionary concepts of operation.

### **3) Integrating Operations: *Maximizing combat capabilities***

Effectively integrating the diverse capabilities found in all four Services remains pivotal to successful joint warfighting. The Air Force contributes to this enduring objective as each element of air and space power brings unique and essential capabilities to the joint force. Our inherent ability to envision, experiment and ultimately execute the union of a myriad of platforms and people into a greater, synergistic whole is the key to maximizing these capabilities. In so doing, we are able to focus acquisition and force planning on systems that enable specific, effects-based capabilities, rather than on individual platforms.

Embedded in our exploration of innovative operational concepts is the efficient integration of all military systems –air, land, maritime, space, and information – to ensure maximum flexibility in the joint delivery of desired effects across the spectrum of conflict, from war to operations short of war. However, effective integration involves more than smart technology investment – it also requires investigation of efficient joint and Service organization and innovative operational thinking. Thus, investments in our people to foster intellectual flexibility and critical analysis are equally as important as our technology investments.

Collectively, our air and space core competencies reflect the visions of the earliest airmen and serve to realize the potential of air and space forces. We foster ingenuity and adventure in the development of the world's most professional airmen. We seek to translate new technologies into practical systems while we encourage intellectual innovation at every level of war. And, we drive relentlessly toward integration in order to realize the potential and maturation of air and space capabilities.

Our proficiency in the three institutional air and space core competencies underpins our ability to deliver the Air Force's six distinctive capabilities in joint warfighting. In turn, our capabilities enable desired effects across the spectrum of joint operations through our task forces drawn from our air and space expeditionary forces. The results of this relationship between core competencies, distinctive capabilities, and operational effects are manifest in the array of successful missions the Air Force accomplished in the past year and those we continue to execute.

## **Expeditionary Construct**

Our core competencies reflect a legacy of innovation and adaptation to accomplish our mission. This point is underscored by the fact that, in spite of over a 30% reduction in manpower in the past twelve years, we have faced an exponential increase in worldwide taskings. Intensifying operations tempo (OPSTEMPO) requires significant changes in the way our force trains, organizes, and deploys to support JFC requirements. We are a truly expeditionary force – the nature of our “business” is deployed operations.

The Air Force meets JFC requirements by presenting forces and capabilities through our Air and Space Expeditionary Force (AEF) construct. This divides our combat forces into 10 equivalent AEFs, each possessing air and space warfighting and associated mobility and support capabilities. A key element of our ability to deliver these tailored and ready expeditionary forces is our development of Task Force Concepts of Operation. Our TF CONOPS describe how we fight and how we integrate with our sister services and outside agencies. They are the fundamental blueprints for how we go to war. Combined with our AEF construct – the principle tool we use to present expeditionary wings, groups, and squadrons – TF CONOPS will guide our decisions in operational planning, enable us to provide scalable, quick-reacting, tasked-organized units from the 10 standing AEFs; and sustain our ability to ensure trained and ready forces are available to satisfy operational plans and contingency requirements.

The AEF construct incorporates a 15-month cycle during which two AEFs are designated as lead for a 90-day “eligibility” period. During this period, the two are either deployed or on alert for daily, worldwide expeditionary taskings, for which they are tailored and presented to the JFC as expeditionary squadrons, groups, and wings (depending on the specific requirement). Meanwhile, the remaining eight AEFs are in various stages of reconstituting, training, or

preparatory spin-up for their lead period over the course of 12-months. It is during this preparatory time (approximately two months) that we integrate the training-to-task of AEF squadrons immediately prior to their on-call window.

Yet, it is important to note that while our combat forces cycle through deployment vulnerability periods, they sustain wartime readiness throughout the 15-month training and preparation cycle--a critical driver of our 90-day eligibility window. Our AEF cycle thus precludes the need for “tiered” readiness by allowing our combat forces to remain current and capable for any contingency or operational plan.

While ensuring necessary capabilities for the JFC, AEF cycles allow us to provide our airmen with a more stable and predictable environment in which to train, re-fit, and equip. In addition, AEF scheduling makes it easier and more practicable for the Air Reserve Component (ARC) forces -- Air Force Reserve Command (AFRC) and Air National Guard (ANG) -- to bring their essential contributions to bear by allowing them to plan definitive absences from their civilian employment. This is a critical advantage of the AEF construct, as ARC forces comprise nearly half of the forces assigned to AEFs and contribute the majority of forces for some mission areas.

## **Operations in 2002**

Confident in our air and space capabilities, and committed to meeting any mission tasked, the Air Force completed an unprecedented array of operations and exercises in 2002. From the mountain ranges in Afghanistan and the jungles of the Philippines to the deserts of the Middle East, and across every continent and body of water, the Air Force joined with land and naval forces to secure America’s national objectives. With each mission, the joint force grows more

capable as it applies vision, experimentation and integration to every undertaking. We do not act as individual services, but in concert as joint warfighters, as we prevail in the war on terrorism and in all undertakings.

Assuring our nation's citizens, the Air Force conducts a range of alert postures involving more than 200 military aircraft at over 20 airbases for **OPERATION NOBLE EAGLE (ONE)**. In conjunction with unprecedented NATO airborne warning support and other U.S. service's assets, we have provided continuous combat air patrols over sensitive/high risk areas, and random patrols over other metropolitan areas and key infrastructure. Last year, we flew over 25,000 ONE fighter, tanker, airlift and airborne warning sorties, made possible only through the mobilization of over 30,000 reserve component airmen. In fact, the ANG and AFRC have effected over 75% of the total ONE missions. We will continue this critical mission, as we execute our most fundamental responsibility —homeland defense.

Throughout **OPERATION ENDURING FREEDOM (OEF)**, the USAF has maintained a continuous, steady-force presence in Afghanistan and the rest of the area of responsibility of more than 14,000 airmen. Air Force assets provide crucial intelligence and situation awareness, combat power and support capabilities for the combatant commander. A key reason for American military success in the region is the performance of Air Force special operations airmen. Working in teams with other special forces, ground units and coalition elements, airmen special operators heroically bring to bear the full weight of air and space capabilities ... from the ground. They introduce our adversaries to the full lethality our airmen, fully integrated on the ground, in the air, and from space.

Fully engaged in all aspects of the war on terrorism, from mobility to close air support, our aircraft and crews flew more than 40,000 OEF sorties in 2002 — over 70 percent of all

coalition sorties. Over 8,000 refueling missions marked the linchpin capability for the joint fight—the tanker force – while the magnificent achievements of airlift assets rounded out overwhelming mobility efforts. Simply put, Air Force mobility forces made operations in a distant, land-locked nation possible.

Beyond air operations, we operated and maintained several constellations of earth-orbiting satellites, and in 2002 we launched 18 missions with a 100 percent success rate -- including the first space launches using Evolved Expendable Launch Vehicles. These activities bolstered America's assured access to space and ensured vigorous, global ISR, missile warning, precision navigation and timing, communications and weather systems. In addition, manned, unmanned, and space intelligence, surveillance and reconnaissance (ISR) assets, not only delivered unprecedented battlefield awareness, but with the Predator unmanned aerial vehicle (UAV), also introduced transformational combat capabilities.

ONE and OEF levied particularly heavy demands on our security forces. In CONUS and forward locations, increased alert postures warranted significant increases in security personnel who constitute a critical element of our force protection capabilities. These demands have raised our force protection posture worldwide and have forced us to adjust to a new “steady state” condition. Security forces bear the brunt of the adjustment effort despite a resultant baseline shortfall of approximately 8,000 personnel to meet the alert postures. In the near term, we involuntarily extended for a second year nearly 9,500 ARC security forces. However, in order to relieve these ARC forces, we concluded a two-year agreement with the Army for short-term support, and initiated several ongoing efforts to combine technology, new processes, and some manpower shifts to achieve a long-term adjustment to this new era.

As we adjust, we continue to deliver force protection through the integrated application of counter and antiterrorism operations, and preparedness for chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents. We employ a tailored selection and application of multi-layered active and passive, offensive and defensive measures. Intelligence and counterintelligence programs support this integrated effort and remain critical to our success. In this regard, we continued to develop and employ all-source intelligence systems; cross-functional intelligence analysis procedures; and an operational planning process to implement Force Protection operations that deter, detect, deny, and destroy threats. Our goal is *to see first, understand first, and act first*.

Though engaged in these security enhancements and the GWOT, our combat operations were not limited to OEF in 2002. Iraqi forces fired on coalition aircraft over 400 times during 14,000 sorties supporting **Operations NORTHERN WATCH (ONW)** and **SOUTHERN WATCH (OSW)**. The Air Force maintained a continuous, regional presence of more than 9,000 airmen, while air and space assets provided vital intelligence, situation awareness, and indications and warning to monitor Iraq's compliance with United Nations' directives.

Whether on the ground or in the skies, our airmen also conducted a host of other missions above-and-beyond standing security requirements around the globe. Even though the war on terrorism is our national military focus, airmen joined soldiers, sailors and marines in the Balkans, South America, Europe and Asia and around the world to assure our friends and allies, while deterring and dissuading our adversaries.

Worldwide humanitarian and non-combat evacuation operations missions remain other key tasks for Air Force personnel. In 2002, for example, airlift crews exceeded 2.4 million airdropped daily ration deliveries in Afghanistan, evacuated allied personnel at threatened

locations around the world and flew typhoon relief missions to Guam, while our explosive ordnance specialists removed unexploded munitions in Africa. Yet, while conducting unprecedented food, medical and civil engineering and evacuation relief efforts in warring regions, we were also on call to perform critical, quick-response missions during natural or man-made crises at home. Through explosive ordnance disposal, fire fighting, law enforcement support, and rapid medical response expertise, we conducted daily operations in support of local, state and federal agencies. During the wildfire season, ANG and AFRC C-130s equipped with modular airborne fire fighting systems flew nearly 200 sorties while assisting U.S. Forest Service firefighting efforts in numerous states. In addition, when Hurricane Lili endangered Louisiana, Air Force aeromedical and critical care forces rolled in with C-9 aircraft to transport and safeguard 40 patients from threatened hospitals.

## **Training Transformation**

Training is a uniquely American military strength. As potential adversaries work to overcome our technological superiority, it is imperative we enhance this strength through improved proficiency at the tactical level and integration at the joint level. Training is integral to our core competencies and the critical enabler for military capabilities, so we are engaged with the other services, unified commands, and OSD in developing and implementing a training transformation plan. Our objective is to train as we will fight, and increase the joint context of our exercises through live, virtual, distributed, and constructive environments. It is the realism of this training that gives us the edge in combat. This involves not only modernizing the integration of space and information operations on our ranges, but also planning for their sustainment to meet future test and training missions while implementing environmentally sound

use and management to ensure long term availability. Additionally, to expand range support for current and emerging missions, we are embarking on a new effort to identify and procure environmental, airspace, and spectrum resources at home and abroad.

### **JCS Joint Exercises, Interoperability Training, and Experimentation**

We advanced joint and combined interoperability skills with our sister services and those of 104 nations throughout 111 JCS exercises and Joint Task Force (JTF) experimentation, conducted in 40 foreign countries. Exercises ranged from large field training such as BRIGHT STAR, to command post exercises like POSITIVE RESPONSE, to smaller, but equally valuable humanitarian exercises, as in the school construction, well drilling, and medical clinic visits of NEW HORIZONS - JAMAICA. These activities provided realistic training and enhanced the effectiveness of all participating nations' forces.

### **Task Force Enduring Look**

Success in future operations hinges upon our ability to learn from previous operations and exercises. To ensure we learn from ongoing operations and adapt accordingly, we established Task Force Enduring Look (TFEL). TFEL is responsible for Air Force-wide data collection, exploitation, documentation, and reporting for our efforts in ONE/OEF. The objective for TFEL is clear—provide superior support to the warfighter, and properly recognize and apply lessons learned *during* rather than only at the conclusion of these operations.

Through extensive investigation and analysis, TFEL examines joint warfighting effectiveness, determines implications, and shapes future Air Force transformation of expeditionary air and space power. The task force documents lessons learned in a variety of

products that cover every conceivable subject matter. As derivative campaigns unfold, TFEL will broaden its assessments in follow-on reports. Applying the lessons in these reports and adapting from our past experiences will help ensure we prevail in future operations.

We are able to accomplish the full spectrum of air and space missions, and improve our capabilities through lessons learned, by focusing on the best way to organize, train and equip. Creativity, ingenuity and innovation are the hallmarks of all that we do, all of which begins with our people.

## WHO WE ARE

*No arsenal and no weapon in the arsenals of the world is so formidable as the will and moral courage of free men and women. It is a weapon our adversaries in today's world do not have. It is a weapon that we as Americans do have.*  
President Ronald Reagan, 20 January 81

America is blessed with vast resources, and chief among these is her people. In the same way, the Air Force relies on the officers, enlisted, civilians, and contractors that comprise our Total Force – Active, Guard and Reserve – for cultural strength and unbridled skill. Air Force strength will never reside in systems alone, but in the airmen operating them. Nor will our capabilities improve solely through technology, but instead through the adaptive insight of our creative and selfless professionals.

Therefore, we recruit and retain a remarkably diverse group to ensure we reach the fullest potential of air and space forces. Their backgrounds reflect the cross-section of American culture – all races, religions, economic and educational backgrounds, skill and management levels, men and women – and make this Air Force the tremendous organization it is today. Just as diverse individual citizens find unity in the term *American*, our personnel embrace an identity and fundamental perspective as *Airmen*.

The underlying qualities found in all airmen emanate from our core values – integrity first, service before self, and excellence in all that we do. Embedded in these core values are the inherent characteristics of our confident, capable airmen – courage, tenacity, professionalism, vision, pride, and, when faced with seemingly insurmountable obstacles, heroism. Indeed, today's airmen carry on the traditions and visions of the earliest generation of airmen while preparing for the challenges of the future.

The diversity of our airmen energizes the advancement of America's air and space power. Airmen embrace transformational ideas and seek to apply them to every aspect of the Air Force, from organizational constructs to concepts of operation and employment. They are able stewards of the nation's space programs, advancing ideas and technologies for national security, as well as for the environmental and economic benefit of our Nation and the world. And yet, ultimately our standout advantage is our warrior airmen themselves, who demonstrate skills and dedication in combat unsurpassed by any in history. Whether maintaining safe skies across the United Nations' sanctioned no-fly zone in Iraq, hunting down terrorists in the jungles of the Philippines, or paying the ultimate price while rescuing fellow Americans in a battle on an Afghan ridge, our airmen are proven combat veterans. Their selflessness resonates the very best of our service.

Airmen are expeditionary — our natural state of operations is not “home station,” but rather, deployed. After two successful cycles, our AEF construct has been validated as an effective means of meeting our nation's expeditionary requirements. Yet we continue to enhance the construct, by initiating significant organizational change to ensure nearly every airman belongs to one of the 10 AEFs. The effect has been a change to our airmen's mindset and culture, where an individual's AEF association cultivates an expeditionary perspective and a clearer appreciation for joint warfighting requirements and capabilities.

### **Force Development – A New Leadership Development Paradigm**

In the past, we addressed aspects of career development, education and assignments individually, but not necessarily in a coordinated, connected approach. Recognizing this, and to prepare for the future more ably, we introduced a systemic, deliberate force development construct that evolves professional airmen into joint force warriors. This construct coordinates doctrine and policies, concentrated to provide the right level, timing, and focus of education,

training, and experience for all airmen, while encompassing personal, team, and institutional leadership skills across tactical, operational, and strategic levels.

In the 21st Century, we need air and space warriors with mastery of their primary skills and others who possess competency beyond their own specialty. However, this diversity must be deliberate to ensure the correct skills are paired according to institutional requirements. Force development encourages many to obtain a deep perspective in their functional area, but at the same time offers the broader perspective we need to complement our leadership team. We begin this transformation with the Active officer corps and will eventually encompass the civilian, enlisted, and Reserve components to better meet the expanding challenges of tomorrow.

### **Education and Technical Training - Emphasis on Joint Leadership/Warfare**

As opportunities resident in advancing technologies unfold, it is imperative that the Air Force be able to draw upon a vibrant collection of educated, technically skilled, and technologically savvy airmen—both uniformed and civilian alike. We are answering this fundamental need in FY03 with aggressive and innovative initiatives to enhance the abilities and breadth of our force. Agile, flexible training is an essential investment in human capital, and our initiatives will ensure our investment delivers the right training to the right people at the right time.

In August 2002, we began our groundbreaking Enlisted-to-Air Force Institute of Technology (AFIT) Program. An initial cadre of senior NCOs began receiving world-class, graduate education to optimize them for greater responsibilities and challenging follow-on assignments. We will also provide a major influx of officers into AFIT, Naval Postgraduate School (NPS) and civilian institutions. In addition, because more than 42% of our civilian force

will be eligible for retirement in the next 5 years, we are committing significant resources to pay for advanced education as well as cross-functional career broadening.

Future military missions and contingencies will require greater sophistication and understanding of the security environment, and our expeditionary force requires airmen with international insight, foreign language proficiency, and cultural understanding. We are working diligently to expand the cadre of professionals with such skill sets and experiences. Our education initiatives will contribute to a major corporate culture shift that fosters appropriate development throughout our airmen's careers to meet evolving force requirements.

## **Diversity**

Foremost among our efforts to enhance the capabilities of our airmen is a passionate drive for diversity. Diversity is a war fighting issue; it is a readiness issue. We must attract people from all segments of American society and tap into the limitless talents and advantages resident in our diverse population if we hope to reach our fullest potential as a fighting force. Nurturing rich representation from all demographics opens the door to creativity and ingenuity, offering an unparalleled competitive edge for air and space development. Today's multi-threat world also mandates that we invigorate in our airmen the ability to effectively think across cultural boundaries and functional paradigms (or stovepipes). We will thus recruit, train and retain airmen without intellectual boundaries, uniquely capable of integrating people, weapons, ideas, and systems to achieve air and space dominance.

## **Recruiting**

It takes tremendous effort to identify and develop such Airmen, yet the return for the nation is immeasurable. Increased advertising, an expanded recruiting force with broader access

to secondary school students, and competitive compensation prepare us to meet recruiting goals. Despite the challenge of mustering such a diverse and skilled collection of Americans, we exceeded our FY02 enlisted recruiting goals and expect to surpass FY03 objectives. We will adapt our goals to meet new force objectives, however the capacity limitations of Basic Military Training and Technical Training School quotas will continue to challenge Total Force recruiting efforts.

Officer recruitment presents similar challenges, yet we continue to attract America's best and brightest. However, we are particularly concerned with military and civilian scientists and engineers. We fell short of our accession goal for this group and have begun all-out recruitment and retention efforts for these critical specialties. For example, in FY03 we plan to begin a college sponsorship program to attract scientists and engineers from universities lacking ROTC programs. In addition, we continue to find recruiting health care professionals especially difficult, so we are making adjustments to ensure improvement.

We will also closely monitor ARC recruitment. Historically, the ANG and AFRC access close to 25 percent of eligible, separating Active Air Force members (i.e. no break in service). Continued high OPSTEMPO may negatively impact our efforts in attracting Air National Guardsmen, as well as drawing separating Active airmen to the Air Force Reserve. As a result, recruiting will have to "make up" a substantial portion of accessions from that market by developing alternatives.

## **Retention**

The Air Force is a retention-based force. The critical skill sets we develop in our airmen are not easily replaced, so we expend every effort to retain our people—the impetus for our "re-recruiting" efforts. Overall retention plans include robust compensation packages that reward

service, provide for a suitable standard of living, ensure a high quality of life, and retain the caliber of professionals we need to decisively win America's wars.

For FY02, it was difficult to calculate accurate retention results due to Air Force implementation of Stop Loss. Nonetheless, we continue to reap the benefits of an aggressive retention program, aided by bonuses, targeted pay raises, and quality of life improvements. Introducing the Critical Skills Retention Bonus for select officer specialties reinforces our commitment to target specific skills suffering significant retention challenges. However, many airmen retained under Stop Loss will separate throughout FY03—a fact of particular concern for our rated force.

Bonuses and special pay programs continue to be effective tools in retaining our members. The ANG has placed particular emphasis on aircraft maintenance fields, security forces, and communication and intelligence specialists, among others, by offering enlistment and reenlistment bonuses, Student Loan Repayment Program, and the Montgomery GI Bill Kicker Program. Another example is the flexible Aviation Continuation Pay (ACP) program--an important part of our multi-faceted plan to retain pilots. In conjunction with our rated recall program, our FY02 plan resulted in a substantial increase in committed personnel. We have a similarly designed ACP program in FY03, and plan future extensions to include navigators and air battle managers.

## **Summary**

Regardless of AEF deployment or home station missions, our airmen accomplish their duties with firm commitment and resolute action. It's what we do. It's who we are: a practical,

technically sound, ingenious force of uniformed and civilian airmen derived from this richly diverse nation to create the world's premier air and space power.

## **Where We're Going**

The first hundred years of powered flight witnessed tremendous and enduring innovation. We commemorate this centennial during 2003 with the theme, *Born of Dreams, Inspired by Freedom*, which recognizes the remarkable accomplishments of generations of airmen. Today's airmen are equally impassioned to bring dreams to reality as we pursue our vision of tomorrow's Air Force, *Unlimited Horizon*. Through this vision, we build a bridge from today's existing capabilities to those required to win tomorrow's wars.

Ultimately our success will be measured by our ability to provide our forces with assured freedom to attack and freedom from attack. Achieving such victory in tomorrow's battlespace will demand our full integration with fellow services, allies, and coalition partners — an essential part of the expeditionary construct. Through our security cooperation efforts, we build these foreign defense relationships and allied capabilities to ensure we have the access, interoperability and international support for our worldwide commitments. Toward this requirement, we are working with our sister services to develop truly joint concepts of operation that integrate the full spectrum of land, sea, air, space, and information warfighting capabilities. When America places its men and women in uniform into harms way, we owe them preeminent resources, planning, and organization to achieve victory over any adversary.

## **Capabilities-Based CONOPS**

While adapting to the new strategic environment, our principal focus has been transitioning from a platform-based garrison force to a capabilities-based expeditionary force. No longer platform-centric, we are committed to making warfighting effects, and the capabilities we need to achieve them, the driving force behind our ongoing transformation. From this point

forward, all of our operational, programming, and budget decisions will be supported by a predefined capability.

Our emerging TF CONOPS will help make this essential shift by providing solutions to a variety of problems warfighters can expect to encounter in the future. Whether detailing our plans for operating in an anti-access environment or identifying how to deliver humanitarian rations to refugees, TF CONOPS lend focus on the essential elements required to accomplish the mission. They cover the complete spectrum of warfighting capabilities (deep strike, information, urban, and psychological operations, etc.) and enable us to tailor forces (expeditionary wings, groups, or squadrons) from existing AEFs to meet JFC's requirements. Responsibility for CONOPS development falls to the Major Commands, with a senior officer on the HQ/USAF Air Staff assigned to each CONOP to serve as their "Champion," facilitating the process.

TF CONOPS directly support Secretary Rumsfeld's efforts to free scarce resources trapped in bureaucracy and push them to the warfighter. They will also be the focal point for a capabilities-based Program Objective Memorandum (POM). In support of this effort, our Capabilities Review and Risk Assessment analyzes and assesses shortfalls, health, risks, and opportunities, while prioritizing required future capabilities. This helps CONOPS developers articulate any disconnects between required capabilities and developing programs, while providing senior Air Force leadership an operational, capabilities-based focus for acquisition program decision-making. TF CONOPS include:

**Global Strike Task Force (GSTF)** employs joint power-projection capabilities to engage anti-access and high-value targets, gain access to denied battlespace, and maintain battlespace access for all required joint/coalition follow-on operations.

**Global Response Task Force (GRTF)** combines intelligence and strike systems to attack fleeting or emergent, high-value or high-risk targets by surgically applying air and space power in a narrow window of opportunity, anywhere on the globe, within hours.

**Homeland Security Task Force (HLSTF)** leverages Air Force capabilities with joint and interagency efforts to prevent, protect, and respond to threats against our homeland – whether within or beyond U.S. territories.

**Space and C4ISR Task Force** harnesses horizontal integration of manned, unmanned, and space systems to provide persistent situation awareness and executable decision-quality information to the JFC.

**Global Mobility Task Force (GMTF)** provides regional combatant commanders with the planning, C2, and operations capabilities to enable rapid, timely, and effective projection, employment, and sustainment of US power in support of US global interests -- precision delivery for operational effects .

**Nuclear Response Task Force (NRTF)** provides the deterrent “umbrella” under which conventional forces operate, and, if deterrence fails, it avails a rapid scalable response.

**Air and Space Expeditionary CONOPS** is the overarching context, which identifies and sequences distinctive capabilities and broad-based functions that air and space power provide the JFC to generate desired effects for national military objectives.

The Air Force is transforming around these Task Force Concepts of Operation. In addition to serving as a roadmap for operators, the TF construct will form the basis for resource allocation, future system acquisitions, and POM submissions in order to find capabilities-based solutions to warfighter problems.

## **Science and Technology (S&T) -- Wellspring of Air and Space Capabilities**

Reaching these warfighter solutions rests in large measure with research and development. Through robust investment and deliberate focus in science and technology, the Air Force invigorates our core competency of technology-to-warfighting. Combined with innovative vision, S&T opens the direct route towards transforming air and space capabilities. Therefore we continue long-term, stable investment in S&T to ensure we realize future capabilities, as well as those that may immediately affect existing systems.

We are improving our S&T planning and collaboration with other services and agencies to ensure: we: 1) encourage an operational pull that conveys to the S&T community a clear vision of the capabilities we need for the future; 2) address the full spectrum of future needs in a balanced and well-thought out manner; and 3) enhance our ability to demonstrate and integrate promising technologies. Some of these new technologies – UAV systems, laser-based communications, space-based radar, and others – show clear promise for near-term, joint warfighting applications. Others present opportunities we can only begin to imagine. We are exploring each of these technologies, and our investment will deliver the required capabilities of our CONOPS.

## **Executive Agent for Space**

Embedded in all of our TF CONOPS, and indeed within most military operations, is an extensive reliance on systems resident in space. The Air Force proudly fulfills the role of Department of Defense Executive Agent for Space with confidence and enthusiasm. Our ability to execute this tremendous responsibility stems from a natural outflow of our core competencies and distinctive capabilities. Accordingly, and in conjunction with the other services and

agencies, we are shaping a new and comprehensive approach to national security space management and organization.

Our capstone objective is to realize the enormous potential in the high ground of space, and to employ the full spectrum of space-based capabilities to enable joint warfighting and to protect our national security. The key to achieving this end is wholesale integration: through air, land, space, and sea; across legacy and future systems; among existing and evolving concepts of operation; and between organizations across all sectors of government. We will continue to deliver unity of vision, effort, and execution to fulfill our mission of delivering the most advanced space capabilities for America.

### **Drawing Effects from Space**

Our horizon is truly unlimited, extending beyond the atmospheric environs of airpower to the reaches of outer space. Our proud Air Force tradition of airpower is joined by an equally proud and continually developing tradition of space power.

In the early days of the space age, only those at the strategic level received and exploited the benefits of space capabilities. The current state of affairs, however, is decidedly different. The former distinctions between “black” programs, “white” space, military, civil, and commercial applications are growing increasingly blurred – in some cases, they are virtually seamless. In short, space capabilities now are woven deeply into the fabric of modern society, and they have altered forever the way we fight wars, defend our homeland, and live our lives.

It is in this context, and this understanding of the widespread and increasing importance of space systems, that we strive to meet present and future national security challenges by providing dominant space capabilities that will:

- **Exploit Space for Joint Warfighting:** Space capabilities are integral to modern warfighting forces, providing critical surveillance and reconnaissance information, especially over areas of high risk or denied access for airborne platforms. They provide weather and other earth-observation data, global communications, precision navigation and guidance to troops on the ground, ships at sea, aircraft in flight, and weapons enroute to targets. All of these capabilities, and more, make possible the tremendous success our joint warfighters achieve during combat operations.

We will enhance these existing capabilities and, where it makes sense, pursue new ones such as the Transformational Communications System (TCS), which will strive to dramatically increase bandwidth and access for warfighters; and Space Based Radar, which will complement the airborne Joint Surveillance Target and Attack Radar System (JSTARS) while migrating Ground Moving Target Indicators (GMTI) into space. We will also develop methods and technologies to enhance our nation's ability to conduct rapid and accurate global strike operations anywhere in pursuit of US interests.

- **Pursue Assured Access to Space:** We cannot effectively exploit space for joint warfighting if we do not have responsive, reliable, and assured access to space. In August 2002, the new Evolved Expendable Launch Vehicle got off to a strong start with the successful launch of Lockheed Martin's Atlas V booster. Boeing's Delta IV program added to the nation's quiver of modern launch vehicles with liftoff in November. We will also pursue advanced and highly versatile reusable launchers and small expendables with extremely short response times to achieve long-term assured access, while taking the necessary steps to maintain and improve our space launch infrastructure.

- **Preserve our Freedom to Act in Space:** We must be able to act freely in space, or risk losing those capabilities essential to joint warfighting. We initiated efforts to increase our space situation awareness, beginning with the new Space Situation Awareness Integration Office at Air Force Space Command, and a similar program at the Space and Missile Systems Center. Future efforts are planned to develop strategy, doctrine and programs to improve the protection of our own space capabilities while denying the benefits of joint space capabilities to our adversaries.

As it is with all Air Force capabilities, the most important resource for national space capabilities is neither technological nor fiscal – it is human. Our Space Professional Strategy fulfills a Space Commission recommendation to develop space professionals and nurture a cadre to lead our national security space endeavors at all levels in the decades ahead. These space-expert airmen will be the core stewards of space operations, and shoulder the responsibility for aggressively advancing joint warfighting capabilities into the high ground frontier.

### **Horizontal Integration of Manned, Unmanned, and Space Assets**

The essence of transformation is found in leveraging the nation's technological dominance to create maximum asymmetrical advantage. Airmen seek unrestricted boundaries when looking at war planning from a theater-wide perspective, or talking about national elements of power. Simply stated, it is in the way we think ... we must take advantage of it.

Our foremost objective is to develop the capability to conduct rapid and precise operations to achieve desired effects and shape the battlespace for the joint force. This requires interfacing numerous DoD and national assets – the seamless, horizontal integration of manned,

unmanned, and space-based systems. An essential element is designing systems that use digital-level, machine-to-machine conversations to expedite data flow and ensure the JFC receives timely, decision-quality information. Such integration will dramatically shorten the find, fix, track, target, engage, and assess (F2T2EA) cycle. In the end, we know that neither JFCs guiding operations, nor special operators putting lead on targets care what source provides data. It is an effect they seek, and what we will provide.

Key to the warfighter's success is **Predictive Battlespace Awareness (PBA)**. PBA requires in-depth study of an adversary well before hostilities begin. Ultimately we want to be able to anticipate his actions to the maximum extent possible. PBA-derived insights allow us to utilize critical ISR assets for confirmation rather than pure discovery once hostilities begin. We are then able to analyze information to assess current conditions, exploit emerging opportunities, anticipate future actions, and act with a degree of speed and certainty unmatched by our adversaries.

Along this path, we are transitioning from collecting data through a myriad of independent systems (Rivet Joint, AWACS, JSTARS, space-based assets, etc) to a Multi-sensor Command and Control Constellation (MC2C) capable of providing the JFC with real-time, enhanced battlespace awareness. Today, this transition is restricted by the necessity to rely on Low Density/High Demand (LD/HD) C4ISR assets. The limitation inherent in LD/HD platforms, forces us to shift their exploitation capabilities between theaters to cover emerging global threats and events. This sub-optimizes overall battlespace awareness and limits our efforts at predictive analysis. In the interim, responsive space-based ISR assets will help mitigate our over-stressed LD/HD systems. Yet ultimately, we need a synergistic combination

of military and commercial assets, advanced data processing capabilities, and assured reachback to achieve true battlespace awareness.

In the future, a single wide-body platform employing tunable antennas and sensors – Multi-sensor Command and Control Aircraft (MC2A) – will replace many of the C4ISR functions of many of today's specialized, but independent assets. Air, ground, and space assets will comprise the MC2C, which will elevate Joint Forces Air Component Commanders' ability to command and control air assets. Additionally, every platform will be a sensor on the integrated network. Regardless of mission function (C2, ISR, shooters, tankers, etc), any data collected by a sensor will be passed to all network recipients. This requires networking all air, space, ground, and sea-based ISR systems, command and control (C2) nodes, and strike platforms, to achieve shared battlespace awareness and a synergy to maximize our ability to achieve the JFC's desired effects.

Uniting joint and coalition information presents the most difficult challenge in providing one common operational picture for key decision makers. We are working closely with our sister services to eliminate the seams between existing systems and taking the necessary steps to ensure all future acquisitions are planned and funded to meet the interoperability requirements of future joint CONOPS.

A critical element of successful information merging is communications, as bandwidth is finite and requires careful management. Long-range or penetrating systems must communicate beyond the horizon despite adversaries' attempts to exploit or interrupt these links. To counter disruption, all systems must be reliable, secure, and bandwidth-efficient. The PBA construct facilitates this objective by eliminating constrictive, stove-piped communications systems while emphasizing networked operations.

We will realize the vision of horizontal integration in our TF CONOPS. GSTF, for example, will deliver the right-sized mix of assets with appropriate sensors capable of penetrating into enemy airspace. Such sensors may be low observable and/or expendable, mounted on either ISR platforms or imbedded into strike platforms. Sensors may consist of special operations forces, inserted before the commencement of hostilities, who communicate with attack platforms during combat via secure electronic writing tablets, annotating targets and threats on the imagery display with a stylus. As technology progresses, and where it makes sense, a significant portion of ISR functionality will likely migrate to space, affording 24/7 persistence and penetration. Likewise, advanced defensive counterspace capabilities will afford these systems protection from enemy actions.

Combining manned, unmanned, and space-based assets with dynamic C2 and PBA transforms disparate collection and analysis activities into a coherent process, allowing the warfighter to make timely, confident, and capable combat decisions. This is what the Air Force brings to the joint fight. It is what air and space warriors are all about. We unlock the intellectual potential of airmen who think across the dimensions of mediums and systems capabilities, for the joint warfighter.

### **Addressing the Recapitalization Challenges**

Despite new CONOPS and visions for future capabilities, we cannot rely on intellectual flexibility to eradicate the challenge of old systems and technologies. Though creativity may temporarily reduce the negative impacts of aging systems on our operational options, ultimately there are impassable limits created by air and space system hardware issues.

We have made tremendous strides in modernizing and improving maintenance plans for our aircraft, however the tyranny of age has introduced new problems for old aircraft. Reality dictates that if we completely enhance the avionics and add new engines to 40-year-old tankers and bombers, they are still 40-year-old aircraft, and subject to fleet-threatening problems such as corrosion and structural failure.

This is equally true for our fighter aircraft, where once cutting-edge F-117s average over 15 years old, and mainstay air dominance F-15Cs are approaching 20 years old. With double-digit surface-to-air missile system, next-generation aircraft, and advanced cruise missile threats proliferating, merely maintaining our aging fighter and attack aircraft will be insufficient. In fact, the dramatic advances offered in many of our TF CONOPs cannot be realized without the addition of the unique capabilities incorporated in the F/A-22. Simply stated, our legacy systems cannot ensure air dominance in future engagements--the fundamental element for joint force access and operations. We will thus continue executive oversight of F/A-22 acquisition in order to ensure program success. While keeping our funding promises, we will procure the only system in this decade that puts munitions on targets, and which is unequally capable of detecting and intercepting aircraft and cruise missiles.

Although ultimately solving these recapitalization challenges requires acquisition of new systems, we will continue to find innovative means to keep current systems operationally effective in the near term. We know that just as new problems develop with old systems, so too do new opportunities for employment, such as our employment of B-1s and B-52s in a close air support role during OEF. We will also pursue new options for these long-range strike assets in a standoff attack role for future operations.

Unlike with the aforementioned air-breathing assets, we cannot make service life extensions or other modifications to our orbiting space systems. Satellites must be replaced regularly to account for hardware failures, upgrade their capabilities, and avoid significant coverage gaps. Additionally, we must improve outmoded ground control stations, enhance protective measures, continue to address new space launch avenues, and address bandwidth limitations in order to continue leveraging space capabilities for the joint warfighter. We are exploring alternatives for assuring access to space, and a key aspect of this effort will be invigorating the space industrial base.

Finally, it is imperative that we address the growing deficiencies in our infrastructure. Any improvements we may secure for our air and space systems will be limited without a commensurate address of essential support systems. Deteriorated roofs, waterlines, electrical networks and airfields are just some of the infrastructure elements warranting immediate attention. Our ability to generate air and space capabilities preeminently rests with the ingenuity of visionary ideas, yet intellectual versatility must be supported by viable systems and structures to realize our Service potential.

### **Organizational Adaptations –**

Commensurate with our drive to enhance air and space capabilities is our identification and development of organizational structures to aid these advances. In 2002, we initiated numerous adaptations to more efficiently and effectively exploit Air Force advantages for the joint warfighter.

## **Warfighting Integration Deputate**

Comprehensive integration of the Air Force's extensive C4ISR systems is paramount for our future capabilities. This requires an enterprise approach of total information-cycle activities including people, processes, and technology. To achieve this, we created a new Deputy Chief of Staff for Warfighting Integration (AF/XI), which brings together the operational experience and the technical expertise of diverse elements (C4ISR, systems integration, modeling and simulation, and enterprise architecture specialties).

This new directorate will close the seams in the F2T2EA kill chain by guiding the integration of manned, unmanned, and space C4ISR systems. AF/XI's leadership, policy, and resource prioritization will capitalize on the technologies, concepts of operations, and organizational changes necessary to achieve horizontal integration and interoperability.

Success has been immediate. AF/XI worked with the Deputy Chief of Staff for Operations to champion increased Air Operations Center funding in the FY04 POM, which accelerated the stabilization and standardization of the weapon system. Subsequently, the base-lined weapon system now has a modernization plan, which is both viable and affordable. AF/XI also led analysis that highlighted imbalances among collection and exploitation capabilities. As a result, we plan to accelerate ground processing and exploitation capabilities within the Future Years Defense Program to close the gap. Major contributions in management of the complex information environment will continue, as AF/XI makes better use of scarce resources, allowing the Air Force to provide the joint warfighter the capabilities to dominate the battlespace.

## **Chief Information Officer (AF/CIO)**

Partnered with AF/XI, the AF/CIO shares responsibility to spearhead the transformation to an information-driven, network-centric Air Force. These two organizations orchestrate the integration within our information enterprise, and establish processes and standards to accelerate funding and ensure priorities match our integrated information vision.

The AF/CIO's specific mission is to promote the most effective and efficient application, acquisition and management of information technology resources under an enterprise architecture. The goal is to provide the roadmap for innovation and to function as a blueprint for the overall leverage of valuable information technology. Enterprise architecture will use models and processes to capture the complex interrelationships between the Air Force's systems and platforms. A resultant example is basing Information Technology (IT) investment decisions on sound business cases, approved Air Force standards, and, ultimately, how a particular technology contributes to specific capabilities. Additionally, we are institutionalizing enterprise architecting as a key construct in defining mission information requirements and promoting interoperability.

Currently, the wide variety of IT standards limits C2 processes and information and decision support to our warfighters. The AF/CIO – AF/XI team is tackling this and all other integration challenges as they develop an enterprise architecture that spans the entire Air Force, while also staying in harmony with other services' efforts.

## **Blended Wing**

We do nothing in today's Air Force, without Guard, Reserve and Civilian personnel working alongside Active airmen. A fundamental initiative of Air Force transformation is formalizing this integration under the Future Total Force (FTF). As part of FTF, we are pursuing innovative organizational constructs and personnel policies to meld the components into a single, more homogenous force. FTF integration will create efficiencies, cut costs, ensure stability, retain invaluable human capital, and, above all, increase our combat capabilities.

A key effort is to "blend," where sensible, units from two or more components into a single wing with a single commander. This level of integration is unprecedented in any of the services, where Active, Guard, and Reserve personnel share the same facilities and equipment, and together, execute the same mission. In essence, blending provides two resource pools within a single wing—one, a highly experienced, semi-permanent Reserve component workforce, offering stability and continuity; the other, a force of primarily Active personnel able to rotate to other locations as needs dictate.

The first blended wing opportunity arose with the consolidation of the B1-B fleet. The move left behind an experienced but underutilized pool of Guard personnel at Robins AFB, GA. Meanwhile, the collocated 93<sup>rd</sup> Air Control Wing (ACW) (Active E-8 Joint STARS), suffered from high tempo and low retention. Hence, Secretary Roche directed that the two units merge, and on 1 October 2002, the blended wing concept became a reality with the activation of the 116<sup>th</sup> ACW.

Over the course of CY02, the 116<sup>th</sup> ACW tackled many pioneering challenges: from legal questions surrounding the command of combined Active-Reserve component units, to

programmatic issues with funding the program from two separate accounts, to integrating different personnel systems used by each component. Airmen from both components are working through these issues successfully, making the 116<sup>th</sup> an example for future FTF blending. Yet, some additional Title 10 and Title 32 provisions still need to be changed to make the FTF a reality. Meanwhile, parallel efforts, such as placing reserve pilots and maintenance personnel directly into active duty flying organizations under the Fighter Associate Program, add to this leveraging of highly experienced Reservists to promote a more stable, experienced workforce.

As organizational constructs, blending and associate programs lay an important foundation for a capabilities-based, expeditionary air and space force, which are inherently flexible and ideal to meet rotational AEF requirements. In a resource-constrained environment, blending promotes efficiencies and synergies by leveraging each component's comparative strengths, freeing funds for modernization while sustaining combat effectiveness, and effecting warfighting capabilities greater than the sum of its parts.

### **Combat Wing**

The comprehensive evaluations in our ongoing transformation include examining our wing structure. Given all of the lessons gleaned from expeditionary operations over the past decades, we asked, "Could we derive advantages in revised wing organization for both force development and combat capability?" The answer was "Yes," and we enacted changes to create the Combat Wing Organization (CWO).

The central aspect of the CWO is the new Mission Support Group. This will merge former support and logistics readiness groups, contracting and aerial port squadrons, as applicable. Within this group, we will hone expeditionary skills from crisis action planning,

personnel readiness, and working with the joint system for load planning and deployment, to communications, contingency bed down, and force protection. Currently, all of these aspects exist in skill sets that none of our officers have in total. But the new expeditionary support discipline will address this, and provide our officers the expertise in all aspects of commanding a forward base system. With this reorganization, each wing will now have one individual responsible for the full range of deployment and employment tasks ... the Mission Support Group Commander.

The restructuring will retain the Operations Group, however group commanders will become more active in the operational level of war. Group and squadron commanders will be role models for operators in the wings, ready to lead the first exercise and combat missions. Similarly, we will establish a maintenance group responsible for base-level weapons system maintenance and sortie production rates. Like their operator counterparts, maintenance squadron and group commanders will be role models for all wing maintainers. Meanwhile, medical groups will retain their current organization, although we are working changes to home and deployed medical operations for future implementation.

Flying and fixing our weapons systems, as well as mission support, are essential skill sets. Each requires the highest expertise, proficiency and leadership. The new wing organization allows commanders to fully develop within specific functional areas to plan and execute air and space power as part of expeditionary units, while also giving maintenance and support personnel focused career progression. This re-organization does not fix something that is broken—it makes a great structure exceptional.

## **Acquisition and Business Transformation**

To achieve our vision of an agile, flexible, responsive, and capabilities-based air and space force, we must transform the processes that provide combatant commanders with air and space capabilities. An example of this in action is the Air Force's efforts to carry out the responsibilities of DoD Space Milestone Decision Authority (MDA). The Secretary of the Air Force delegated those responsibilities to the Under Secretary of the Air Force, under whose leadership immediate benefit was realized. Adapting an effective process already in use at the National Reconnaissance Office (NRO), the Under Secretary instituted a new streamlined space acquisition program review and milestone decision-making process. This new process was used for the first time in August 2002 in developing a contract for the National Polar-orbiting Operational Environmental Satellite System. This effort creates an opportunity for the Air Force to apply performance and cost pressure on defense industrial firms through their chief financial officers and board of directors by linking executive compensation to contract performance.

In addition to the major process changes for DoD space, the Air Force's Business Transformation Task Force directs and integrates further process improvement and adaptation. Core business and operations support processes -- such as acquisition, logistics, maintenance, training, medical and dental, among others -- are crucial, as they ultimately determine our overall enterprise *effectiveness* and directly sustain combat capabilities. An additional category of processes called "enablers" completes the Air Force enterprise. Examples of "enablers" include: management of human resources, finances, contracts, property plant and equipment, and information. The enablers are important as they facilitate our core capabilities and determine the overall *efficiency* of our enterprise.

The Air Force will enact business transformation from an integrated enterprise perspective, examining every process and process links. Accordingly, we will employ industry best practices and identify management metrics to improve process efficiency without degrading our enterprise effectiveness; expand our customer's self-service management capability and free up needed resources for the operational communities; and provide real-time, accurate financial data for better decision making. Already, acquisition reform has effected notable improvements, including:

- 1) Streamlined our acquisition and contracting regulations, replacing lengthy prescriptive sets of rules with brief documents that emphasize speed, innovation, sensible risk management and elimination of time-consuming process steps that have little value. As previously mentioned, our new National Security Space acquisition process is an example of progress in this area.
- 2) Created a Program Executive Office for services to bring new efficiency to the growing area of services contracts. This key area, which accounts for nearly half of our procurement budget, had no prior centralized coordination and oversight.
- 3) Developed and initiated SMART (System Metric and Reporting Tool). This real-time, web-based application pulls data from dozens of legacy reporting systems to give everyone from program managers up to senior leadership direct visibility into the "health" of hundreds of acquisition and modernization programs. When fully deployed in FY03, it will automate the tedious and laborious process of creating Monthly Acquisition Reports and possibly Defense Acquisition Executive Summary reporting to OSD.

4) Empowered “High Powered Teams” of requirements and acquisition professionals to create spiral development plans to deliver initial capability to warfighters more quickly, and add capability increments in future spirals.

5) Designed a Reformed Supply Support Program to improve the spares acquisition process by integrating the support contractor into the government supply system. Contractors now have the same capability as government inventory control points to manage parts, respond to base level requisitions, track spares levels, and monitor asset movement.

6) Continued, with OSD support, expansion of the Reduction in Total Ownership Cost (R-TOC) program, to identify critical cost drivers, fund investments to address them, and generate cost saving and cost avoidance. We also created standard processes and a business case analysis model to use for initiatives within R-TOC. In FY03, OSD allocated \$24.9M no-offset investments to R-TOC that will return \$53.2M through FY08. A planned \$37.1M investment across the FYDP will save a projected \$331M in operations and maintenance through FY09.

These initiatives are only the beginning of a comprehensive and aggressive approach to reforming business practices. Our efforts today will have a direct effect on efficient and effective air and space capability acquisition both immediately, and in the future.

### **Ensuring Readiness**

Integrating systems and expanding business practices will not only have dramatic effects on air and space capabilities, but also reduce readiness challenges. However, we still face daunting, but surmountable, obstacles. We must overcome a multitude of installations and

logistical issues to secure flexible and timely execution of expeditionary requirements for joint warfighting.

Reconstituting and reconfiguring our expeditionary basing systems and wartime stocks is a critical element of our force projection planning. While we made significant strides in funding, we require additional investments in bare base systems, vehicles, spares, munitions, and pre-positioning assets. Our infrastructure investment strategy focuses on three simultaneous steps. First, we must dispose of excess facilities. Second, we must fully sustain our facilities and systems so they remain combat effective throughout their expected life. Third, we must establish a steady investment program to restore and modernize our facilities and systems, while advancing our ability to protect our people and resources from the growing threat of terrorism at current, planned and future operating locations – at home or abroad.

We are making progress. Improved vehicle fleet funding allowed us to replace some aging vehicles with more reliable assets, including alternative fuel versions to help meet federal fuel reduction mandates. Targeted efficiencies in spares management and new fuels mobility support equipment will improve supply readiness. In addition, our spares campaign restructured Readiness Spares Packages and repositioned assets to contingency sites. Moreover, to increase munitions readiness, we expanded our Afloat Prepositioning Fleet capabilities, and continue acquiring a broad mix of effects-based munitions in line with the requirements of all TF CONOPS.

Finally, our “Depot Maintenance Strategy and Master Plan” calls for major transformation in financial and infrastructure capitalization to ensure Air Force hardware is safe and ready to operate across the threat spectrum. To support this plan, we increased funding in FY04 for depot facilities and equipment modernization. We also began a significant push to

require weapon systems managers to establish their product support and depot maintenance programs early in the acquisition cycle, and to plan and program the necessary investment dollars required for capacity and capability. Additionally, we also are partnering with private industry to adopt technologies to meet capability requirements. The results from these efforts will be enhanced, more agile warfighter support through the critical enabler of infrastructure.

### **Expanding AEF Personnel**

The attacks of 9/11 significantly increased workload and stress in a number of mission areas for our expeditionary forces. Since our day-to-day operation is absolutely set to the rhythm of the deploying AEF packages, we must make appropriate adjustments. Recent and ongoing efforts to maximize the identification of deployable forces and align them with AEF cycles, assisted in meeting immediate critical war fighting requirements. However, some career fields remain seriously stressed by the war on terrorism. Accordingly, our efforts focus on changing processes that drive requirements not tuned to our AEF rhythm. We developed formulas to measure, and gathered quantitative data to evaluate, the relative stress amongst career fields to redirect resources to the most critical areas. We also began a critical review of blue-suit utilization, to ensure airmen are used only where absolutely necessary, and maximize the use of the civilian and contract workforce for best service contribution and military essentiality.

Though the Air Force constitutes 26% of the DoD's military end-strength, we contribute approximately 36% of the military workforce that augments activities outside our Service. We are refocusing uniformed manpower allocation on our distinctive capabilities to reduce the stress on our active force. Additionally, we are carefully considering technologies to relieve the increased workload. These efforts exist within our longer-term work to reengineer, transform

and streamline Air Force operations and organizations, and have allowed us already to realign some airmen recruits into our most stressed career fields.

## **Summary**

As the two mediums with the most undeveloped potential, air and space represent the largest growth areas for national security and the greatest frontiers for joint warfighting. As such, air and space operations will play an ever-increasing role in the security of America and her allies. The Air Force will exploit technology, innovative concepts of operations, organizational change, and our ability to embrace creative ideas and new ways of thinking. We will bring to bear the full suite of air and space capabilities for tomorrow's joint force commander – drawing from every resource, developing closely with all services, and overcoming any obstacle to succeed.

## **Conclusion**

The events of the last year have emphasized the dynamics of a new international security era. The decade of new states following the Cold War has been followed by the rise of non-state actors, many following a path of aggression and destruction. Yet, just as America adapted to new global dynamics in the past, we will again confront emerging challenges with confidence and faith in our ability to meet the demands of assuring freedom.

The Air Force remains dedicated to drawing on its innovation, ingenuity, and resolve to develop far-reaching capabilities. The ability to deliver effects across the spectrum of national security requirements is the cornerstone of the vision and strategy of Air Force planning and programming. In conjunction, and increasingly in integration with ground, naval, marine and other national agency systems, the Air Force will play a central role in elevating joint operations. We recognize the greatest potential for dominant American military capabilities lies in the integration of our air and space systems with those of other services and agencies, and our success in this objective will be evident in every mission to deter, dissuade or decisively defeat any adversary.